

Claims

1. Device for inputting control signals to a computer, which is provided with a display unit to display a playing field for playing figures arranged in several parallel rows and a ball forming part of a computer-based simulated table soccer game,
having a housing (1),
having multiple rods (2) in housing (1), which are mounted so as to be slidable in an axial direction and rotatable around their own axes by at least 360°,
having at least two bearings (4) or openings in the housing for each of the rods,
having devices to limit travel attached to rods (2),
having a sensor (8) on each rod (2) to determine translation, which continuously determines the position of the rod in an axial direction by means of a mechanical contact connection or a non-contact method,
having a sensor (7) on each rod (2) to determine rotation, which continuously determines the angle of rotation of rod (2) with regard to rotation around its own axis by means of a mechanical contact connection or a non-contact method, and
having an interface to transfer the data received by the sensors to a computer.
2. Device according to Claim 1, wherein a rod (2) is provided for each of the rows of a team of the table soccer game displayed on the display unit.
3. Device according to Claim 1 or 2, wherein four rods (2) are positioned next to each other and parallel to each other in housing (1), the ends of which protrude from at least one side of the housing.
4. Device according to Claim 1 or 2, wherein eight rods are positioned next to each other and parallel to each other in the housing, whereby the ends of four rods facing a first user protrude from one side of the housing, and the ends of four further rods facing a second user protrude from the opposite side of the housing.
5. Device according to one of the preceding claims, wherein a brake is provided on the rods to retard or block the rotation of a rod in a direction, and the brake is connected to the computer via an interface, in order that the brake can be

actuated by the computer whenever a certain situation arises in the simulated table soccer game.

6. Device according to one of the preceding claims, wherein the sensors provided comprise optical, mechanical, magnetic, inductive, or electric sensors.
7. Device according to one of the preceding claims, wherein potentiometers (7, 8) are provided as sensors.
8. Device according to Claim 7, wherein a gear unit (9, 10, 11, 12, 13) is provided on rods (2) to actuate potentiometer (7, 8).
9. Device according to Claim 8, wherein a first toothed wheel (9) is provided on rod (2) and a second toothed wheel (11), which engages with first toothed wheel (9), is provided on potentiometer (7) used to determine the rotation.
10. Device according to Claim 8, wherein a carriage (10) is positioned on rod (2), wherein potentiometer (8) equipped with a toothed wheel (13) used to determine translation is attached to carriage (10), and wherein a non-displaceable gear rack (12) is provided on housing (1) parallel to rod (2), whereby toothed wheel (13) engages with gear rack (12).
11. Device according to Claim 9 and 10, wherein potentiometer (7) used to determine rotation is attached to carriage (10).
12. Device according to one of Claims 1 to 6, wherein at least one optical distance measuring device is provided on the housing as a sensor used to determine translation, and a transmitting device to trigger the distance measurement is provided on the corresponding rod or a part of the rod serves as a transmitting device.
13. Device according to Claim 12, wherein a disk is provided on the rods, which is provided with a pattern, and wherein at least one optical sensor used to scan the pattern on the disc is provided on the housing as a sensor used to determine the rotation of the rod.

14. Device according to Claim 12, wherein at least one distance measuring device is provided on the housing as a sensor used to determine the rotation of a rod, and wherein a disk is arranged on the corresponding rod either inclined toward the rod's axis at an angle other than 90° or positioned off-center from the rod's axis.
15. Device according to one of Claims 1 to 6, wherein the sensor features a freely-rotating trackball adjacent to the rod, wherein two rollers are provided, which are positioned adjacent to the trackball and which measure the trackball's movements, wherein perforated disks are provided on the rollers, and wherein light-emitting diodes and sensors are provided on the perforated disks to detect the pulses of light from the light-emitting diodes that pass through the holes of the perforated disks.
16. Device according to one of Claims 1 to 6, wherein the sensors feature at least one light source, and at least one optical sensor is provided, which picks up the light reflected from the rod.
17. Device according to Claim 16, wherein a bar pattern is provided on the rod.